

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A phase shifting wavefront superimposition method, in particular a phase shifting interferometry method, for wavefront measurement of optical imaging systems, wherein comprising:

registering intensities (I_n) of superimposition patterns of object wavefronts and reference wavefronts for a predefined location, wherein the superimposition patterns are produced successively in over time with respective phase shifting by shifts having predefined phase steps (ϕ_n) for a respectively predefined location;

from the registered intensities, determining an object-induced phase difference (ϕ) between the object wavefronts and the reference wavefronts for the respective location;

determining phase shift errors ($\delta\phi_n$) in the superimposition patterns produced successively by means of a spatial superimposition pattern evaluation; and

correctively utilizing the determined phase shift errors in determining the object-induced phase difference (ϕ) by correctively utilizing the determined phase shift errors.

2. (currently amended): The phase shifting wavefront superimposition method according to claim 1, wherein predefined phase jumps in an at least one-dimensionally periodic

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structure are used to provide at least one of the object wavefronts ~~or~~and the reference wavefronts ~~in the determination of the phase shift errors.~~

3. (currently amended): The phase shifting wavefront superimposition method according to claim 1 or 2, wherein, ~~in order to said~~ correctively ~~utilize~~utilizing the phase shift errors in ~~the determination of determining~~ the object-induced phase difference, comprises determining compensating correction contributions $(\delta\phi_n)(\delta\omega_n)$ to apodisation weights $(\phi_n)(\omega_n)$ ~~are determined~~ and ~~used~~using the apodisation weights in a relationship equation of the object-induced phase difference as a function of the superimposition pattern intensity.

4. (previously presented): The phase shifting wavefront superimposition method according to claim 1 or 2, wherein the method is configured as a phase shifting interferometry method for wavefront measurement of an optical imaging system.

5. (new): A phase shifting wavefront superimposition method, comprising:
determining pattern intensities of temporally successive superimposition patterns of reference and object wavefronts for a predetermined location, where each successive pattern is obtained by phase shifting the object and reference wavefronts relative to one another;
determining phase shift errors in the temporally successive superimposition patterns using spatial superimposition pattern evaluation; and

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determining an object-induced phase difference between the object wavefronts and the reference wavefronts for the predetermined location from the pattern intensities and utilizing the determined phase shift errors for correction.